


Issue Classification 	Application/Control No. 10/028,978	Applicant(s)/Patent under Reexamination KONDO ET AL.
	Examiner Michael V. Battaglia	Art Unit 2627

ISSUE CLASSIFICATION												
ORIGINAL				INTERNATIONAL CLASSIFICATION								
CLASS		SUBCLASS		CLAIMED				NON-CLAIMED				
369		044.130		G	11	B	007	/24				/
CROSS REFERENCES								/				/
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)							/				/
369	283	275.300						/				/
								/				/
								/				/
								/				/
								/				/
								/				/
Michael V. Battaglia 04/10/2006 (Assistant Examiner) (Date)				WILLIAM KORZUCH SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 2800 (Primary Examiner) (Date)				Total Claims Allowed: 10 O.G. Print Claim(s) 8/0 O.G. Print Fig. 12				
MDS 4-12-06 (Legal Instruments Examiner) (Date)												

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant				<input type="checkbox"/> CPA				<input type="checkbox"/> T.D.				<input type="checkbox"/> R.1.47			
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original		
1	1		31		61		91		121		151		181		
2	2		32		62		92		122		152		182		
5	3		33		63		93		123		153		183		
3	4		34		64		94		124		154		184		
4	5		35		65		95		125		155		185		
6	6		36		66		96		126		156		186		
8	7		37		67		97		127		157		187		
9	8		38		68		98		128		158		188		
10	9		39		69		99		129		159		189		
	10		40		70		100		130		160		190		
	11		41		71		101		131		161		191		
	12		42		72		102		132		162		192		
	13		43		73		103		133		163		193		
	14		44		74		104		134		164		194		
	15		45		75		105		135		165		195		
7	16		46		76		106		136		166		196		
	17		47		77		107		137		167		197		
	18		48		78		108		138		168		198		
	19		49		79		109		139		169		199		
	20		50		80		110		140		170		200		
	21		51		81		111		141		171		201		
	22		52		82		112		142		172		202		
	23		53		83		113		143		173		203		
	24		54		84		114		144		174		204		
	25		55		85		115		145		175		205		
	26		56		86		116		146		176		206		
	27		57		87		117		147		177		207		
	28		58		88		118		148		178		208		
	29		59		89		119		149		179		209		
	30		60		90		120		150		180		210		

PMA 5/10/06

Application No.: 10/028,978

Docket No.: 21994-00036-US

MA
5/04/06
Pages 24-22 5
Page 22, paragraph 2, should read:

According to an aspect of the first embodiment of the present invention, as mentioned above, with defining that a pitch between two adjacent groove sections G or land sections L is "P", a wavelength of laser beam is " λ " and a numerical aperture of objective lens is "NA", an information recording medium is constituted such that a microscopic pattern 20 having a relation of " $P < \lambda < 1/NA$ " is formed and either the land section L or groove section G is recorded. Accordingly, an information recording medium, which is recorded in high density in conjunction with enabling to reduce cross erase, can be obtained.

MA
5/04/06
Pages 35-36 3
Page 36, paragraph 2, should read:

A mixture film of ZnS and SiO₂ is particularly desirable for a material of the first and second protective layers 122 and 124, because recording sensitivity and C/N (carrier to noise ratio) are ~~hard to be~~ barely deteriorated by ~~a plurality of repetition of repetitions~~ recording and reproducing. A thickness of the first protective layer 122 and the second protective layer 124 are within a range of 10 to 500 nm respectively. The thickness of the first protective layer 122 is desirable to be within a range of 10 to 50 nm so as to be excellent in a recording characteristic such as C/N and erase ratio and to be rewritable stably a plurality of times.

MA
5/04/06
Pages 36-37 2
Page 37, paragraph 1, should read:

A film thickness of the first protective layer 122 is thinner than that of the second protective layer 124, the first protective layer 122 becomes a rapid cooling structure. In order to ~~relief~~ relieve thermal damage, a film thickness of the first protective layer 122 is desirable to be within a range of 2 to 50 nm. Further, it is preferable that a filming speed of the first protective layer 122 must be slower than that of the second protective layer 124. Consequently, increasing of jitter by rewriting is suppressed and a number of rewriting increases.

Application No.: 10/028,978

Docket No.: 21994-00036-US

MA 5/04/06 ³⁹ ² Page 40, paragraph 1, should read:

An address data, which is one of the auxiliary information (sub information) to be recorded in the present invention, is a data selected out of an absolute address, which is assigned to whole the information recording medium 1, a relative address, which is assigned to a partial area, a track number, a sector number, a frame ~~number~~ number, a field number, a time information and a error correction code. It is a data, which is converted from a data described in the decimal notation or the hexadecimal notation, for example, to the binary notation (including the BCD code and gray code).

MA 5/04/06 ³ ³ Pages 74-75 Page 76, paragraph 1, should read:

An output of a semiconductor laser of gallium nitride system compound is 30 mW maximally. Generally, an output of light emitting element falls down to almost one fifth of original output of the light emitting element inside a recording apparatus due to a coupling efficiency of optical element, which is used for a wavelength λ being within a range of 350 to 450 nm. In other words, a laser power becomes 6 mW on each surface of the information recording mediums 1 through 5 even though a laser having an output of 30 mW is used. On the ~~contrarily~~ contrary, it is desirable that a recording power is assigned to be higher as high as possible in order to realize excellent phase change recording in contrast. Therefore, it is necessary for the information recording mediums 1 through 5 to be recorded by a recording power of about 6 mW. It is necessary for absorptivity and transmissivity of the recording layer 12 or 123 of the information recording mediums 1 through 5 to be relatively higher value therefor.

Application No.: 10/028,978

Docket No.: 21994-00036-US

*Mr. A
5/10/06* *10/28/90-91*
Pages 92-93, paragraph 2, should read:

As mentioned above, according to an aspect of the present invention, there provided an information recording medium, which is at least composed of a substrate having a microscopic pattern constituted by a shape of continuous substance of approximately parallel grooves formed with a groove section and a land section alternately, a recording layer formed on the microscopic pattern and a light transmission layer formed on the recording layer. Further, the microscopic pattern is formed with having a relation of $P < \lambda / NA$ and a thickness of the light transmission layer is within a range of 0.07 to 0.12 mm, wherein P is a pitch of the groove section or the land section, λ is a wavelength of reproducing light beam and NA is a numerical aperture of objective lens. Therefore, an information recording medium, which can reduce cross erase and also be recorded in higher density, can be obtained. Furthermore, recording in accordance with difference of reflectivity or phase difference is performed by assigning modulated amplitude to be more than 0.4, so that an error rate can be decreased to a practical level.